



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,669	04/05/2001	Yasuharu Kudo	9281-3950	3502

757 7590 08/14/2003

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER

TRAN, TRANG U

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 08/14/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,669

Applicant(s)

KUDO, YASUHARU

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Hatano (US Patent 5,995,169).

In considering claim 1, the admitted prior art discloses all the claimed subject matter, note 1) the claimed a local oscillator for outputting a local oscillation signal is met by, 2) the claimed a mixer for mixing a supplied television intermediate frequency-converting a resultant signal to a television signal of a specific channel through which the signal is to be transmitted among television channels is met by, and 3) the claimed a band-pass filter connected at a post stage of the mixer and tuned to a frequency of the specific channel is met by. However, the admitted prior art explicitly does not disclose the claimed a variable band-pass filter, wherein a tuning frequency of the variable band-pass filter can be shifted to a frequency out of a frequency band of the specific channel. Hatano teaches that instead, the band-pass filter 70 is of a variable frequency type, so that its center frequency can be varied in accordance with a signal from the terminal 32 (Fig. 3, col. 4, lines 29-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the variable band-pass filter as taught by Hatano into the admitted prior art's system in order to provide an SIF signal

Art Unit: 2614

processing circuit that can operate either with only one resonator incorporated in it or with a reference signal supplied from outside.

In considering claim 2, the claimed wherein the variable band-pass filter is tuned in range from a first frequency to a second frequency, the specific channel is set between the first frequency and the second frequency is met by, and the claimed a frequency out of the band is lower than the first frequency or is higher than the second frequency is met by the band-pass filter 70 is of a variable frequency type, so that its center frequency can be varied in accordance with a signal from the terminal 32 (Fig. 3, col. 4, lines 29-41) of Hatano.

In considering claim 3, the combination of the admitted prior art and Hatano disclose all the limitations of the instant invention as discussed in claim 1 above, except for providing the claimed wherein when the frequency of the specific channel is higher than a middle frequency between the first and second frequencies, the frequency out of band is set to be equal to or lower than the first frequency, and when the frequency of the specific channel is lower than a middle frequency between the first and second frequencies, the frequency out of band is set to be equal to or higher than the second frequency. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate when the frequency of the specific channel is higher than a middle frequency between the first and second frequencies, the frequency out of band is set to be equal to or lower than the first frequency, and when the frequency of the specific channel is lower than a middle frequency between the first and second frequencies, the frequency out of band is set to be equal to or higher than the second

Art Unit: 2614

frequency into the combination of the admitted prior art and Hatano's system in order to increase the flexibility of the system by allowing the user to change the bands of the variable band-pass filter.

Allowable Subject Matter

3. Claims 4-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4-6 are directed to a television signal transmitter. They identify the uniquely distinct features: "wherein the local oscillator is provided with a first varactor diode for changing the frequency of the local oscillation signal, the variable band-pass filter is provided with a second varactor diode for changing the tuning frequency, the television signal transmitter further comprises: a memory in which data for setting the frequency of the local oscillation signal and the tuning frequency is stored; a D/A converter for converting the data into a d. c. voltage; a first external power source; voltage adding means to which the d. c. voltage is supplied; and first switching means, the d.c. voltage is applied to the first varactor diode, a voltage outputted from the voltage adding means is applied to the second varactor diode, and the voltage of the first external power source is enabled to be applied to the voltage adding means by the first switching means". The closest prior art, the admitted prior art and Hatano (US Patent No. 5,995,169), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Claims 7-9 are directed to a television signal transmitter. They identify the uniquely distinct features: "wherein the local oscillator is provided with a first varactor diode for changing the frequency of the local oscillation signal, the variable band-pass filter is provided with a second varactor diode for changing the tuning frequency, the television signal transmitter further comprises: a memory in which data for setting the frequency of the local oscillation signal and the tuning frequency is stored; a D/A converter for converting the data into a d. c. voltage; a second external power source; a third external power source; and second switching means, the d.c. voltage is applied to the first varactor diode, and one of the d. c. voltage, a voltage of the second external power source, and a voltage of the third external power source can be applied to the second varactor diode by the second switching means". The closest prior art, the admitted prior art and Hatano (US Patent No. 5,995,169), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto (US Patent No. 6,573,949 B1) discloses television signal receiving tuner with frequency-modulation broadcast-band attenuation circuit.

Yau et al. (US Patent No. 6,418,162 B1) disclose frequency spectrum measurement apparatus.

Halik et al. (US Patent No. 5,528,633) disclose tuner with quadrature down converter for pulse amplitude modulated data applications.

Crawford et al. (US Patent No. 5,525,906) disclose detection and elimination of wide bandwidth noise in MRI signals.

Rodeffer (US Patent No. 5,507,025) discloses method and apparatus for satellite receiver with variable predetection bandwidth.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT
August 7, 2003


MICHAEL H. LEE
PRIMARY EXAMINER